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IN THE UNITED STATES PATENT & TRADEMARK OFFICE

IN RE APPLICATION OF :

THOMAS DANIEL, ET AL. :

: EXAMINER: METZMAIER, D. S.

SERIAL NO: 09/831,915 :

FILED: MAY 25, 2001 :

: GROUP ART UNIT: 1712

FOR: HYDROGELS CAPABLE OF  
ABSORBING AQUEOUS FLUIDS :DECLARATION UNDER 37 C.F.R. § 1.132COMMISSIONER FOR PATENTS,  
ALEXANDRIA, VIRGINIA 22313

SIR:

Now comes Dr. Manfred Essig who deposes and states:

1. That I am a graduate of Universität Kaiserslautern and received a Ph.D. degree in the year 1981.
2. That I have been employed by BASF AG, for 18 years as a scientist in the field of Electron Microscopy.
3. That the following experiments were carried out by me or under my direct supervision and control.

The dried hydrogel according to the present invention was investigated by Scanning Electron Microscopy (SEM) to show that the silicon in the dried hydrogel particles is distributed throughout their bulk and not just on the surface of the particles.

In preparation of the measurement, the hydrogel particles were fixed in a polymer block. Then the polymer block was cut through by means of high-speed rotating diamond cutting tool to prepare cross sections of the dried hydrogel particles.

The SEM method performed is a well known standard technique described in the attached pages from the BASF internal website which are incorporated by reference into the Declaration. The SEM method allows the analysis of the distribution of elements on the dried hydrogel particles.

The sheet of three micrographs depicting the identical field of view, attached herewith, is incorporated into the Declaration by reference. On this sheet, the first image from the top, a Backscattered Electron Image, shows the cross section of particles without reference to a particular element. The second image from the top shows the elemental distribution of sodium and the third image shows the elemental distribution of silicon in the cross section of the particles. Clearly, the third image, in comparison with the first image, shows that silicon is present throughout the particle and not just on the surface.

In addition the micrographs elucidate the silicon distribution in the bulk of the particles as being caused by kneading ending up with a marble like phase separation.

4. The undersigned petitioner declares further that all statements made herein of his own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of this application or any patent issuing therefrom.

5. Further deponent saith not.

  
\_\_\_\_\_  
Signature

05/06/05  
\_\_\_\_\_  
Date